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ABSTRACT

The paper reviews descriptions and studies of classes for children with learning disabilities (LD). Considered are aspects of regular class placement of LD students such as academic achievement and social adjustment, and attitudes of educators such as regular and special class teachers. On the basis of the review, full-time, self-contained classes are not recommended for LD students. Alternatively recommended are a part-time, highly-individualized resource room program for pupils with nonspecified learning disabilities and close collaboration between the regular classroom and the resource room teachers. It is maintained that the combined efforts of the teachers should result in a full-time program with a high degree of individualization for LD pupils. (Author/MC)

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THE ORGANIZATION OF EDUCATION FOR LEARNING HANDICAPPED PUPILS: A REVIEW AND RECOMMENDATION

EC

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The two major aims of this paper are to present data relevant to a discussion of the desirability of self-contained special classes for children designated as "learning handicapped", and to posit alternative methods for improving the quality of education available to such students. A review of the relevant literature is preceded by a brief overview of the development of special education, and of the behavioural label "learning handicapped".

I. AN HISTORICAL OVERVIEW

> ...The early history of the handicapped child is particularly pathetic and tragic. In primitive and ancient times the unfit were often abandoned or destroyed, and examples of this practice continue to this day. Beginning in the Middle Ages such children were exploited to amuse others. For example, dwarfs were used as clowns and imbeciles as fools. With modern times a variety of forces have led very gradually to better treatment of the impaired.[1]

Compulsory education laws brought public school systems face to face with the problems of educating all children, including the handicapped. Before this time a scholastic survival of the fittest insured that those students who could not or would not adjust to the rigid course of study offered by the schools either dropped out, were expelled, or were never sent to school by their parents.

The first alternative to standardized regular schools offered to exceptional children was total segregation in special schools for the handicapped. Residential schools for the most obviously handicapped emerged in North America around the middle of the nineteenth century.

A residential school for the deaf was established in Connecticut in 1817, and a school for the blind opened in Massachussetts in 1829. Schools for the moderately retarded and crippled followed. The Canadian pattern for the establishment of special schools for the handicapped paralleled that set by the United States, with the first Canadian school for the deaf operating in Toronto in 1868, while the first residential school for the blind opened in Brantford in 1871. These institutions were not automatically conceived of as means to separate but equal education for the handicapped; before 1905 when the supervision of provincial schools for the deaf and blind was transferred into the control of the Department of Education in Ontario, these schools were managed by the same Department of the Provincial Secretary that managed prisons and asylums. The change in auspices was intended to help remove "the impression that they were some kind of custodial institution".[2]

The notion of allowing handicapped children to live at home while attending special day schools and classes gained favour, and a movement to establish such day schools and special classes in regular schools evolved. By 1939 there were nearly four hundred special classes in Ontario with such targets as sight-saving, hard-of-hearing, tubercular and sickly children, and speech correction classes. It is significant to note that while "...there was an evident trend on the part of school boards to make special classes an integral part of their school systems...[3] the modus operandi for special education from its outset was one of segregating the exceptional child from "normal" children for most, if not all, of his limited educational career.

By the 1950s ten types of children were being accounted for in special education categories; mentally retarded (severe and moderate), socially maladjusted, emotionally disturbed, blind, partially seeing, deaf, partially hearing, speech impaired, crippled, and children with chronic health problems. Those children who could not fit into their regular classes' systems, either because they did not achieve according to academic norms, or because they disrupted or prevented the achievement of others, or both; or those students who otherwise could not be dealt with in any manner satisfactory to their teachers, found their way into whatever special classes for exceptional students were available. When there was no apparent sign of physical disability they were received by the classes for the emotionally disturbed, the socially maladjusted, and the mentally retarded. Some of these students may have fit those categories rather well but it should be recognized that the goal of maintaining special classes for the handicapped, with homogenious groups of students manifesting specifically the problem that class was designed to serve, and no other, is one which is probably as difficult to achieve as is finding a single child who perfectly displays all those behaviours and achievements that are consistently ranked "normal" for his age and sex. It is no surprise at all that into the special classes that existed in the 1950s children were placed under headings which well might have been inappropriate or inadequate to describe their particular problems.

In 1947 the physician Strauss, and the special educator Lehtinen produced a definitive work that described a particular type of brain-injured child, listing seven criteria for classifying the child as such. This list included perceptual disorders, behavioural

disorders, thinking or conceptual disorders, perseveration, slight neurological signs, a history of neurological impairment, and no history of mental retardation in the family. Satisfaction of the first four behavioural characteristics was sufficient evidence for a diagnosis of brain-injury, regardless of verification of the last three biological signs. Lehtinen prescribed techniques for educating this particular type of child (later labeled the Strauss Syndrome child), and in that way a new category in special education was born - the brain-injured. Special education services for the brain-injured child, based on the Strauss and Lehtinen category, and designed to implement Lehtinen's techniques began to develop in the 1950s, although special self-contained classes for the new exceptionality did not become common until the 1960s, when legislative bodies gave the group the recognition that would release funds for the establishment of such services. Ontario recognized the special needs of this group of children in 1966 with Regulation 339/66 which stated that the Department of Education was prepared to support "classes for children clinically diagnosed as neurologically impaired, including perceptually handicapped children, and who were unable to profit from a regular classroom program, but who might profit from special classroom instruction". By the time Ontario saw services for this group of children become available, that category of exceptionality introduced by Strauss and Lehtinen had undergone nearly twenty years of restructuring. Researchers and educators revised the definition of Strauss and Lehtinen to include more children exhibiting similar if not all characteristics of the Strauss Syndrome; these new definitions have since been edited, and made more exacting to reduce a tendency for the new category to encompass too many children. The name of the disability has gone through a myriad of changes, each name change signifying distinctions of the suspected locus and

etiology of the disability, the degree of severity of the problem, and even the personal attitudes of the label makers towards the exceptional child.* As the names changed, certain children who had previously been placed in the traditional classes for the retarded or emotionally disturbed now seemed more appropriately placed in the special self-contained classes established for the new exceptional group. Other children who were very tenuously being tolerated in regular classes moved into this category also. But, while the labels keep changing, the players are relatively the same (give or take a few in- or ex- cluded by new definitions), and this new exceptional group still exhibits the lack of perfect fit and homogeneity, which plagued the older categories of exceptionality.

It is precisely the inability of those involved to reach agreement on a definitive label to describe an homogeneous group of exceptional students that points to the problem of attempting to fit such fluid and variable beings as children into neat compartments. One is forced to question the power and value of such compartments to explain (or remediate) problems. Lilly (1970) notes that, "...we seem to be obsessed with categories and organizational designs which entrench these categories". Sodhi (1973) goes further, suggesting that "...special education is suffering from a serious disease caused by the hardening of the categories". The question of the proper place of tight or loose

* Some of these labels are brain-injured, brain-damaged, minimally brain-damaged, minimal cerebral dysfunction, neurologically impaired, psychoneurological learning disability, neurophrenic, Strauss Syndrome, perceptually handicapped, perceptually impaired, visual perceptual disability, auditory perceptual disability, language disordered, language disabled, specific learning disability, general learning disability, learning disordered, reading disabled, dyslexia, specific dyslexia, aphasia, dysarthria, and so on.

categories in education is important in any attempt to examine the benefits of educational methods which have been prescribed for children according to the categories into which they have been put. A further complication, from the point of view of a review of studies related to the education of the "learning handicapped" is that different researchers seldom use the same definition of disability when selecting populations to study. Moreover, this special "learning handicapped" group (regardless of what one calls it) is so comparatively new in special education, that a search of the literature reveals little scholarly work that concerns this population, at all. Hopefully, the research conducted with those groups into which "learning handicapped" children were formerly placed will shed some light on questions of the effects of different treatments and placement policies in special education in general, and in the education of learning handicapped children in particular.

II. A REVIEW OF RELEVANT STUDIES

Studies of the effects of special class placement for exceptional students fall broadly into two categories: studies which attempt to measure the efficacy of special class placement in improving the academic achievement of exceptional students; and studies that attempt to measure the effects of special placement on the self-concepts and social adjustment of special children.

A. Special Class Placement and Academic Achievement

Efficacy studies have continued to be conducted during the past fifty years in North America and Europe. It is likely that such evidence is continuously called for in order to justify continuing fiscal policies which support such classes. Because efficacy findings wield such power

to work for or against special classes as a special education method, these studies have been received with great criticism, and frequently findings have been patently rejected as invalid. Certainly the efficacy studies suffer the methodological problems common to studies that must go into the field for data rather than be tightly controlled in laboratory settings. Nevertheless, there is enough data to suggest that educational efficacy is not well served by special class placement, that this practice would seem to deserve serious reconsideration, if academic achievement is its justification.

Goldstein, Moss and Jordan (1965) found that mildly retarded children, placed in small special classes upon entering school at age six, with carefully selected, trained and supervised teachers to direct them through a balanced curriculum, supplemented with excellent instructional materials, fared no better academically than randomly selected control group retardates in regular classes. The results of this study further indicate that special classes are not necessarily effective for significantly improving the academic achievement of children whose IQ scores are above 80. Bradfield et al (1973) conducted a project which had as its aim the return of exceptional children to regular classrooms from special ones. Children who had been in special classes for the educable mentally retarded (EMR) and children who had been in special classes for the educationally handicapped (EH) were integrated into regular 3rd and 4th grade classes that were operating for all students according to a diagnostic, precision-teaching method. The integrated special children, both the EMR and EH groups, did as well as the control subjects still in special classes, on all academic measures, except in mathematics (where the experimental group did significantly better than

the controls). In 1968 fifty-seven students from four types of special classes in Scarborough, Ontario (Hayball and Dilling, 1969), were returned to regular classes. The subjects included students from opportunity classes for the EMR and slow-learner; perceptual classes for the learning handicapped; behavioural classes; and a special reading class. There was no control group. According to the measurements taken of their academic achievement after a year in the regular program all students performed according to grade level expectations, except those from the opportunity classes who performed slightly less well. A longitudinal study of the effects of special class intervention on emotionally disturbed children conducted by Vacc (1972) indicated that after one year of special placement a sample of 16 disturbed pupils showed greater gains in academic achievement than a control group in regular classes that had been matched for IQ, age, grade placement, achievement level, social class, and the clinical diagnosis of emotional disturbance. However, a follow-up survey conducted five years and eight months later showed that the achievement gains made by emotionally disturbed children who experienced special class placement were not different from those of the emotionally disturbed children who remained in regular classes. In fact, the trend in improvement, though not statistically significant, favoured non-placement. McKinnon (1969) conducted a different follow-up study of eighty-eight urban elementary school children who were placed in special classes for the behaviourally disordered, the average placement lasting one and one-half years. The follow-up was conducted three years after termination of special placement, and showed that

"maladjustment had increased from levels noted at the end of special class placement", and as well, progress in reading and arithmetic attainment had decreased. The special program appeared to have no long-term positive effects on social or academic behaviour. After his study of emotionally handicapped children in the elementary schools Rubin (1968) reported that "results did not overwhelmingly confirm the hypothesis that special class programming is generally beneficial to emotionally handicapped children". In a study, ex post facto in design, 425 children, clinically labelled as neurologically handicapped, had been placed in three instructional conditions: self-contained classes with from eight to ten pupils, regular classes with supplementary tutoring instruction for a median of four hours per week per child, and unsupplemented regular instruction. The test conditions lasted for a period of from 15 to 18 months, after which time an analysis of covariance revealed no significant differences among the three treatment groups in any area of measured academic functioning. That finding contrasts with results obtained by Zedler (1968) who studied children with "neurologically based language learning disabilities." Her results clearly supported the hypothesis that such pupils would make significantly greater gains in scholastic achievement and mental functioning if they remained in the regular classes and received supplementary clinical tutoring, than if they were placed in special self-contained classes and received no such tutoring. Her data yielded increased full scale and verbal IQ scores on the WISC for the regular class experimental group, while those same scores decreased for the special class controls.

Finally, Sabatino (1971) conducted a study to evaluate the use of resource rooms as an alternative to special class placement for children with learning disabilities. One hundred fourteen learning disabled children in one county's school system were assembled into four matched population cells, including the control group (no special treatment), a self-contained special class, and two resource room plans. A battery of fourteen tests was administered pre and post experimental conditions. Each of the experimental conditions showed greater academic gains than was seen in the control (regular class) group. The resource plan by which thirty children spent one hour per day each, in small groups with resource personnel, and the remainder of the day in regular classes, showed the greatest gains in general.

To summarize thus far, the research conducted to measure the efficacy of special class placement of academic gains for children labeled educable mentally retarded (mildly retarded), emotionally disturbed, and learning handicapped would indicate little to recommend the policy by which such children have been placed in full-time, self-contained classes. Rather, the data seems to suggest that alternatives to this treatment, which has been the primary treatment method of special education for decades, yield academic gains equal to or greater than segregated educational facilities; in some instances no special treatment has served equally well.

B. Special Class Placement and Social Adjustment

A considerably smaller body of work measuring the effects of special class placement on the exceptional child's feelings about himself, and his social adjustment has been developed, suggesting that the academic achievement of a child is still considered more important than his emotional adjustment, at least by those who direct research efforts. The trend of the findings in this area is less clear than that produced by the academic efficacy research, to the point that many of the studies' results clearly contradict one another.

A study which would indicate positive effects of special class placement that of Schurr, Towne and Joiner (1972). Their investigation of the trends in self-concept of ability over a two year period of special class placement used the Michigan State University Self-Concept of Academic Ability Scale (SCA). This instrument was administered verbally to 22 EMR students prior to special placement, and at points during two years of such placement. Contrary to the expectations of the researchers, the evidence supported the hypothesis that placing EMR students in special classes "can be expected to have a positive effect on self-concept of academic ability" thereby reducing the validity of the argument by which lack of academic improvement has been attributed to negative self-concept changes.

A related but more qualified point of view is presented by Dunn:

> ...While the evidence is somewhat mixed of the adjustment of retardates in the sheltered environments of the special class, generally, it has been found to be superior to that of those left in the regular grades. Apparently the self-concept of the higher IQ pupils goes up somewhat with success, but at the expense of the low IQ pupils who are rejected and isolated by them. With their increase in status and confidence, the higher IQ retardates grow in their dislike of the special class placement and increase in their feelings of self-derogation about such placement.[4]

This information contrasts with the findings reported by Bradfield et. al. (1973) in the study cited earlier in this paper. Those researchers also took measurements of self-concept changes and social adjustment in children returned to regular classes from special ones. Of the model regular class which operated according to precision teaching techniques the authors report, "...statistical analysis suggests that both the educationally handicapped and educable mentally retarded children of the model class showed considerable improvement in interpersonal behaviour when compared with children in the special class control groups". The educationally handicapped children integrated into the heterogeneous regular class experienced significantly greater positive change in attitutes toward educational concepts, themselves, and their families, than did the control groups. The study in Scarborough (Hayball and Dilling, 1969) also showed satisfactory social adjustment made by exceptional students coming from the opportunity, perceptual, behavioural, and reading special classes to the regular classes. Those students from opportunity classes scored highest on measures of restraint, objectivity, and friendliness. (It is impossible to know if special class placement

had facilitated or inhibited these attitudes.) This group of students was also most positive in their feelings about being returned to regular classes, though all of the special students were similarly, generally favourable towards the change. Finally this study showed that the special students were generally accepted by their "normal" peers in the regular classes.

Bowra et al (1974) reported the results of a student self-image evaluation conducted among an experimental group of opportunity class students, returned to regular classes in Halton County. The responses to a questionnaire designed to measure students' impressions of their own attitudes, social development and academic progress indicated that when compared with a control group of segregated "opportunity" students, the integrated students were 13% more positive in their self-images. The authors concluded that the children in the Integrated Opportunity Program had a higher self-image than those from Segregated Opportunity Classes.

Flynn and Flynn (1970) were interested in determining the effects of an alternative method of treating retardates on the social adjustment of these children, and found that EMR children who were removed from regular classes for 45 minutes a day of individualized tutoring in a special resource room, were not positively affected in the area of social adjustment by this arrangement. Rather, the authors noted that a stigmatization of those students who were singled out for special treatment developed.

From the data available to date there is not enough evidence to recommend or condemn the effects of special class placement on the emotional-social adjustment of certain exceptional students. In addition, as no studies in this area have been done specifically with learning handicapped populations, no meaningful conclusions can be drawn as to

what effects such placement might have on the self-concepts and social adjustment of these children in particular.

III. EDUCATORS' ATTITUDES TOWARD SPECIAL CLASS PLACEMENT

One important issue in a discussion of special class placement is the attitudes of educators towards such classes. The regular class teacher has come, to an extent, to depend upon the special classes to take from her students with whom she cannot achieve a satisfactory relationship. The special class teacher obviously depends upon special classes for the exceptional child, for her most important professional interests. Both kinds of teacher have a stake in the issue of special class placement, and a review of recent literature turned up five studies relevant to this aspect of the question. A particularly interesting study was conducted by Barngrover (1971), when she interviewed fifty educators and asked the question, "would the mildly exceptional child be better served by being returned to the more heterogeneous grouping of the regular classroom?". Among the population of educators were 16 regular class teachers, 13 special class teachers, 14 educational administrators, and 7 school psychologists. Fifty four per cent of the total population favoured continuation of special classes and cited some of the following reasons as explanations of their preference: it helps the teachers "to get the slow ones out"; there is less disruption in the regular classroom; less frustration and more success for the exceptional child; and more individualized attention and specialized help for special deficits. The 46% of the population who advocated regular class placement for exceptional students supported their

preference with such reasons as: horizons are widened in regular classes; stimulation will be greater for the exceptional child; there will be better models of peer behaviour; more peer group pressure for good behaviour; higher expectations and hence performance for the special children in heterogeneous classes; and, finally, special classes have failed to meet the special needs of these children anyhow. The most interesting feature of the results of this study was that teachers favoured retention of special classes significantly more than non-teachers, and regular teachers were proportionately more favourably disposed to retaining the special classes than were the special class teachers themselves. Overall, more than 2 out of 3 teachers favoured retaining the special classes. In contrast, approximately 2 out of 3 non-teaching personnel (administrators or psychologists) favoured regular class placement for exceptional students.

Teachers' beliefs about the preferability of either heterogeneous or homogeneous groupings in education have been shown to correlate with their abilities to teach such groups effectively. Barker-Lund (1970) showed that little learning of any kind took place when teachers who believe in homogeneous streaming were assigned a heterogeneous group of pupils. It is noteworthy to point out here that teachers' attitudes towards maintaining exceptional students in regular classes have been shown to change when teachers have been given something more than their ordinary, unspecialized training for regular classroom teaching. For example, Glass and Meckler (1972) conducted an eight week summer workshop

for eighteen regular class teachers in Indiana, the goal of which was to equip these teachers with diagnostic, remedial and behavioural mamagement skills, and to modify teachers' authority behaviour to create a classroom climate that encouraged greater student responsibility, dialogue between teacher and students about decisions and problems, and greater authenticity and more positive regard and empathy in teacher-pupil interactions. Pre- and post- workshop administrations of the Minnesota Teacher Attitude Inventory indicated that after the workshops teachers felt more competent and were more attracted to the notion of maintaining mildly exceptional children in their regular classes. The authors felt that the significance of their study was that it demonstrated that specific skills relative to the instruction of mildly handicapped children can be isolated, and taught to teachers in a relatively short period of time.

Johnston's (1972) study probably also reflects the lack of competence felt by regular teachers for maintaining exceptional students in their classes. He found that "the teachers were much more willing to work with a special student if there was a resource teacher involved in setting up the goals, and objectives for the child".

In the Halton County Board of Education when "opportunity" students were reintegrated into regular classes the teachers of the regular classes were surveyed to determine, among other things, whether they felt that the needs of the special students were being met (Bowra et al, 1974). When asked if the opportunity child was progressing in

the program that the teacher developed for him in her regular classroom, 30 out of 34 teachers responded positively. Twenty-nine out of 35 felt that the integration project was successful, and 25 out of 29 teachers felt that the integrated program being offered, which included the assistance of instructional aides to the regular teachers, was better suited to meet the academic and social needs of the opportunity child than was the program in the segregated classrooms.

Yates (1973) was interested in demonstrating some differences in methods by which regular teachers may be instructed in the teaching of handicapped children. In an experimental program involving 40 elementary school teachers, a group of thirty teachers was given 100 hours of instruction; 97 of these involved programmed and laboratory work, while a group of ten teachers (the controls) were instructed by the more traditional lecture method. Yates found that there was a significant difference in the amount of information obtained favouring the experimental group over the control subjects, and more importantly he found that after this experiment the group of thirty teachers felt that students of limited or superior intelligence could be successfully integrated into regular classroom settings.

IV. THE POPULATION OF SPECIAL CLASSES

What type of student is most likely to be found in special classes? It is well-acknowledged that only certain disabled children are identified and find their way into special classes.

In 1968, Dunn contended that "...with racial integration, to an even greater degree than ever before, lower tracks, including special classes have been becoming repositories for unwanted, minority group children". Predictably, such a claim caused great uproar in the educational community, and researchers set out to validate or invalidate this claim. Franks (1971) conducted a study of the ethnic and social status characteristics of children in EMR and learning disability classes. He surveyed the populations in these classes, in Grades 1-8 in Missouri, and took his data from a random sample of 274 EMR children, and 215 learning disabled children. More than one-third of the EMR population were of Afro-American background, while only slightly more than 3% of the learning-disabled population were black. Franks states that he supports the claim that a disproportionate number of children in EMR classes are from low income and non-white families. An implication of Franks' findings might be that minority group children are disproportionately represented in whatever classes are at the bottom of the academic heap in a particular school system. For example, it would be interesting to see what the racial composition of learning disabled classes would be in Missouri, if there were no type of special class lower on the scale (i.e. EMR).

Rubin, Krus and Balow (1973) conducted a more complicated study in Minnesota, where they drew from another on-going project the Educational Follow-Up Program, a sample of 49 students who scored below

80 on IQ tests administered at the beginning of their school careers. The investigators followed these low IQ pupils, without intervening in any way, to see who got placed in differential (special) classes. Of their sample, 32 students wound up in special classes while 17 remained in regular classes. Of the 32 who were differentially placed, nine were consistently scoring at 80 or above on IQ tests at the time of placement, while of the 17 remaining in regular classes the entire group consistently scored below 80 on the same tests. It was apparent from their results that IQ per se was not the deciding factor in special class placement. The research team found that socio-economic status correlated significantly with the type of placement a low IQ child was accorded, low socio-economic status being channeled into special class placement when IQ and achievement levels were held constant. The authors suggest that a combination of low socio-economic status and poor classroom behaviour contribute to special class placement of children who would not be eligible if placement were based on IQ scores alone. (On the question of the academic efficacy of special classes, the authors felt it significant to include in their data the fact that at age 9, highly significant differences were found on measures of academic achievement that favoured regular classes over special classes for these students. They point out that there had been no differences between the two groups on numerous measures of preschool readiness, and therefore it would appear reasonable to conclude that academic achievement differences at age 9 represented the effects of differing school experiences on the two groups.)

The research cited above gives a degree of validity to claims made in a D.C. court, in 1967, in the case of Hobson vs. Hanson. In this court case practices of educational placement and labelling were called into question, and the court ruled that the methods by which special placement assignments were made were primarily dependent upon standardized aptitude tests which have been shown to be "completely inappropriate for use with a large segment of the student body". That is, those tests used with highly heterogeneous student populations (for example in certain large metropolitan areas) were initially standardized on and made relevant to a primarily white, middle-class student group, and were not capable of producing unbiased descriptions of the learning ability of non-white or non-middle class students. Sodhi (1972) produces the figure that approximately 68-75% of the children placed in special classes are misplaced, and that the majority of these are children from the minority groups. The ethical and legal question is thus unavoidable; that is, are special classes serving to further or impede the attainment of the goal of equal educational opportunities for all? A Federal District Court in Southern California found one school district guilty of discrimination as a consequence of their practices of grouping students, and contended that certain citizens were being deprived of their rights to an equal education. It is suggested by one critic that if the matter were to be taken to the United States Supreme Court "special education and much of educational psychology has a significant possibility of being declared unconstitutional!"[5] Some parents, too, are arguing that the concept of separate special education is contrary to equality.

Another contention is that "...once a child is improperly placed in a class, there is little chance that the student will leave it...contributing to the lack of...mobility is the student's self-image which is formed by improper placement and creates a self-fulfilling prophecy of low achievement".[6] Research on self-fulfilling prophecy effects in education are legion, and it should suffice to say at this point that the suggestion that special class placement has such a negative effect cannot be ignored, although there are some findings (e.g., Schurr et al, 1972) to the contrary.

V. SPECIAL CLASS PLACEMENT, AND SOME ALTERNATIVES

One reads that segregation as a special education policy came from the assumption that it would provide a more secure and comfortable environment for exceptional students. Many continue to view segregated classes as a humanitarian treatment of handicapped children, but a growing number are concerned with the social effects of this segregation on both the handicapped and non-handicapped populations. These people argue that a sheltered, protective segregated environment does not prepare the handicapped for the realities that must be faced in the competitive world of which he is a part, outside of school; and they question what we are teaching young "normals" about respect for human variability, cooperativeness, and compassion when we continue to screen certain students out from the mainstream, as if to deem them unfit to be educated with the rest. It is difficult to argue that this action communicates anything very positive to the normal child about the handicapped person.

This is not to suggest that there is no need for differential treatment for any children at all. Nearly every researcher is in

agreement with the statement that there are certain children who must be provided with treatment that may segregate them from normal peers. Both Budoff (1971) and Sodhi (1972) submit that psychotic, severely hyperactive, moderately and severely retarded, and multiply handicapped children "require specialized care and treatment, and...should not be integrated into a regular class". To these groups Lilly (1970) adds that group of children "so obviously deviant as to never have been enrolled in any kind of normal school program". For all but the severely impaired as specified above, he recommends that traditional special education services as represented by self-contained classes should be discontinued immediately. This proposal makes two questions pertinent: exactly how can one determine when the severity of a disability makes special placement necessary; and, if special self-contained classes for the mildly handicapped were to be discontinued, what would prevent these children from being rejected by the regular classes that rejected them in the first place? To answer these questions basic revisions must be made in the ways of thinking about exceptionality, as well as in the structure of special education services, so that alternatives to special placement may be available to satisfy special needs. To the consideration of these two areas, the focus of this paper now turns.

VI. ALTERNATIVES TO SPECIAL PLACEMENT

Sodhi (1972) and Lilly (1970) offer landmark recommendations in the area of new ways of thinking about special education. The former, concerned with the self-fulfilling prophecy phenomena, and with the problems of stigmatization, suggests that "we should eliminate all diagnostic procedures that cannot be demonstrated to result in successful treatment attempts". He further recommends strongly that treatment should

be totally avoided whenever the effectiveness of such cannot be plainly demonstrated. These recommendations strike at the diagnosis - special placement approach which has been used in special education so commonly as to seem almost integral to it.

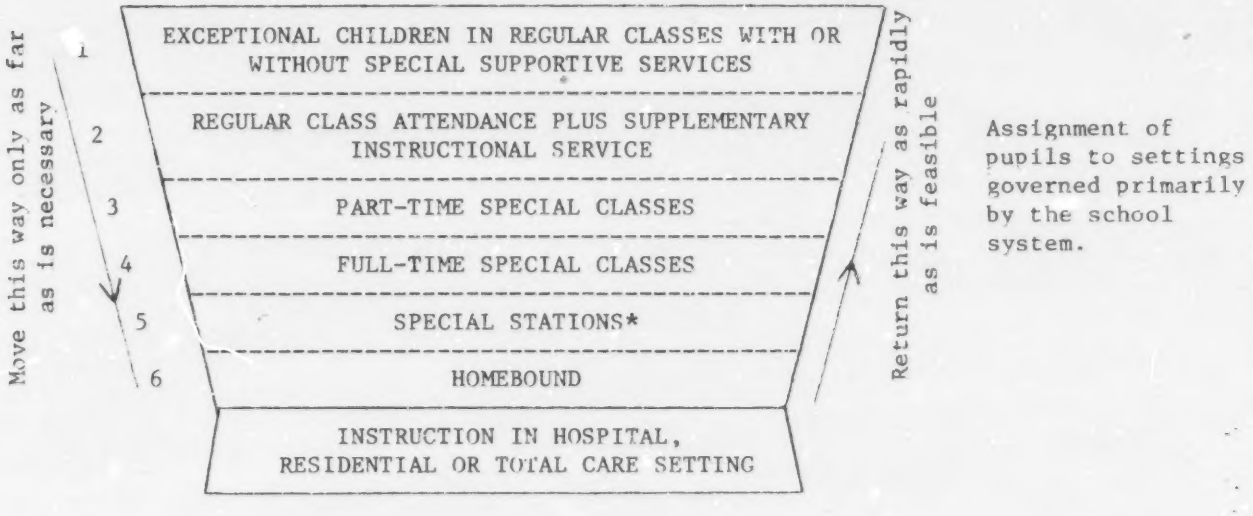
Moving in nearly the same direction as Sodhi, Lilly (1970) submits that it is not productive to place a label of exceptionality on a student which posits that the causative agent of the disability lurks somewhere within the child, and that the problem therefore is based at the child. Certainly, for the most part all those children recently labeled EMR, emotionally disturbed, behaviourally disordered, educationally handicapped, learning disabled, or brain injured have in common the fact that they have some sort of teacher-perceived problem. It seems unfair to place the entire burden for the problem on the child, when it necessarily involves much more than just him. Lilly suggests that the problem may be seen as a breakdown in the student-teacher relationship that results in the disruption of normal school routines. Therefore, he further suggests that a move should be made away from defining exceptional children and towards defining exceptional school situations. "An exceptional school situation is one in which interaction between a student and his teacher has been limited to such an extent that external intervention is deemed necessary by the teacher to cope with the problem." (Perhaps, in this definition should be included the right of the child to request intervention if he perceives such a breakdown.) The new focus has the potential for significantly altering the approach to special education for the mildly handicapped student. From this position a complete analysis of the classroom stiuation would be called for before the nature of the problem could be stated, and before

steps to the solution could be taken. In this way it is possible that needs for minor modifications in the educational situation may be identified, where they might have gone undiscovered in the model of exceptionality that proposes either you've got it (the exceptionality, as if it were a disease), or you haven't.

To look more specifically at the question of how it would be determined when an exceptional situation is so severe as to require that the student be completely removed to a special class placement, it is proposed that before segregation is adopted as a treatment method, any methods less severe should be attempted first. This position is in keeping with the Cascade System of Special Education Services devised by Deno (1970), and presented in Figure 1.

FIGURE 1

THE CASCADE SYSTEM OF SPECIAL EDUCATIONAL SERVICES**


Move this way only as far as is necessary
1
EXCEPTIONAL CHILDREN IN REGULAR CLASSES WITH OR WITHOUT SPECIAL SUPPORTIVE SERVICES
2
REGULAR CLASS ATTENDANCE PLUS SUPPLEMENTARY INSTRUCTIONAL SERVICE
3
PART-TIME SPECIAL CLASSES
4
FULL-TIME SPECIAL CLASSES
5
SPECIAL STATIONS*
6
HOMEBOUND
INSTRUCTION IN HOSPITAL, RESIDENTIAL OR TOTAL CARE SETTING
Return this way as rapidly as is feasible
Assignment of pupils to settings governed primarily by the school system.
Assignment of individuals to settings primarily governed by health, correctional, welfare or other agencies

* Special schools in public school system.

** Deno, E. Special education as developmental capital. Exceptional Children, 1970, 37, 229-237.

Here it is demonstrated that between the situation of regular class placement without supplementary support services, and full-time special class placement, there are fully two categories of placement to be considered first. Her model is based on the rule that one moves towards segregation of the child only as far as is absolutely necessary, and one moves in the direction back to regular class placement as rapidly as feasible. It is important to note that for years, largely due to educational economics, the only positions available for a child would be either to fit into Deno's category 1, or to drop into category 4. The size of the chasm between the types of services may have had a profoundly negative effect on that child's chances of ever being able to return to regular placement again. It is seen in Deno's model that a number of in-between situations are suggested, and at this point it would be useful to explore these possibilities more fully.

A. Maintenance in the Regular Classroom Program, Full-Time

That the regular classroom itself has the potential to change, and so become more capable of accommodating a wide range of pupil abilities, must not be overlooked. That is, where regular classroom programming has been traditionally rigid, and lacking opportunities for the individualization of instruction, it can become more flexible.

It has been noted that it is unreasonable to return a child from a special class right back to the regular class which rejected him in the first place. In the Bradfield et al, (1973) study which returned exceptional students to regular classes, those regular classes had been fundamentally modified, so that within them it was possible to provide more individualized instruction for all children. The method employed to restructure the

classes was the adoption of precision-teaching techniques coupled with adherence to precisely defined and structure curriculum. Special training was given to teachers in workshop settings, to enable them to supervise the total individualization of the instructional program within their classes. Behaviour modification techniques which called for clear positive consequences to be provided for appropriate behaviours, whether academic or social, were used as well as intricate precision charts which recorded performance and which were maintained whenever possible by the children themselves. Bradfield also included the use of a system of cross-age tutoring, whereby reading sixth graders used programmed materials to tutor non-reading children in the model classes twice weekly for a period of one-half hour. As was indicated earlier in this paper, results of this experiment showed that the educable mentally retarded and educationally handicapped students integrated into these "regular" classrooms, did as well as the control subjects in special classes for the handicapped on all measures.

The approach used by Bradfield is not totally unlike the one proposed and implemented by Griffiths et al (1972). That research team arranged for four first and four second grade regular teachers in Florida to select one child each from their classes who they assumed to be "learning disabled". According to the records, WISC scores and reports of former teachers, these students did appear to have been correctly diagnosed by their teachers. It was the aim of the project to see if these teachers could be assisted in developing techniques by which they could remediate the problems of the particular children, within regular

classes, by themselves. A control group of children matched for IQ, age, sex, grade, and socio-economic status was selected. Both the experimental and control groups were tested pre- and post- experimentally, and the results clearly indicated that children with learning disabilities can be dealt with in the regular classroom, provided that they are given some special remediation by their teacher. All those experimental children who had been scoring below grade level in reading skills, and who had been falling behind in their classwork, were able to maintain normal levels when special teaching techniques were used.

Christoplos (1973) criticises the traditional "diagnostic/ prescriptive teaching" that the above study seems to endorse, on the grounds that it does not take into account the general classroom goals and procedures of the teacher. As diagnostic/prescriptive teaching has been remedially applied in the past, the child so dealt with has been made an exception to the on-going program, and makes demands for extra time and effort from his already busy teacher; due to these factors Christoplos warns that the chances for success of the remediation are not good. Christoplos suggests that the starting point for changing the regular class programs, in order to accommodate a wide range of student abilities, must be the teacher's goals and methods in regard to the entire classroom. The author and three students worked with first grade teachers in three elementary schools in Baltimore, with the aim of broadening the teachers' approaches so that all children could be incorporated more successfully into regular programs at a level manageable for each child and for the teacher as well. Christoplos stressed

that three factors were essential for realization of this goal. First, the prominent use of inter-student tutoring most be adopted into classroom methods, so that the teacher is not overwhelmed by the variety of children, curricula, etc., and so that the children can have important one-to-one relationships in learning. That such activity would foster cooperative attitudes and self-respect is an additional benefit of such a program. Christoplos demonstrated that tutoring relationships are possible so that every child has the chance to be tutored and to be a tutor, because it is the fact (long underemphasized) that those children weak in one area are not necessarily weak in all areas. Strengths of each individual child should be emphasized rather than the weaknesses of a few. Also essential to the program developed by these researchers is the teacher's ability to maintain records of achievement that would enable her to appreciate what progress was being made by each student at all times. The most important ability required for this program appears to be the capacity to analyze learning tasks and break them into small components that are sequenced in the order which they need to be, for assimilation. Computer jargon includes the term "identifying entering competencies" for this task, while educators might express it as well by pointing to the need to teach to the child's level and to his abilities. Christoplos, in her report, includes the information that considerable commercial material which has been produced is designed with this approach to instructional sequencing, and in addition there are texts available which can help the teacher to become proficient in such task analyses. The author concludes, "Finally, only after the above general classroom techniques have been tried is there any need

for psychological assessment of individual children in the usual sense of the term. Assessment then is initiated at the teacher's request because of difficulties in successfully fitting the child into regular task sequences, procedures or activities". Then a diagnosis would revolve almost totally around the child's performance in the activity area into which the teacher is trying to fit him. The significant point being made here is that before one even begins to try supplementing the regular class with special education support services it is most reasonable to consider first all the ways in which the regular class can be restructured to accommodate greater human variability.

One more radical way by which regular education could be restructured to avoid categories of mild exceptionality by which children get segregated is by a shift to flexible grouping in a non-graded system, which would allow children to group together on the basis of ability or achievement level.

> ...A particular group would not be placed together exclusively for full school day or term, (rather) the composition of groups would tend to shift from subject to subject or from skill to skill. At times age, social maturity, or interests would be primary considerations in bringing children together, rather than ability or achievement groupings. Sometimes, children of low ability would be placed with younger children, but mixed-age groupings would be common so that groups would not tend to be identified by a particular age level.[7]

Finally, Safran agrees (1971) that the goal is to maintain the child in the regular class and suggests that before any child is seen in need of removal from the mainstream, it should be determined whether that child could simply be removed from a particular traumatic situation. This corresponds to Lilly's notion of examining exceptional school

situations. It is suggested that one must consider the possibility that where one regular class may prove traumatic for a certain child, another might not. Personality clashes between teacher and pupils are not uncommon, nor are they a sign of any weakness whatever on the part of either, necessarily. However, in many instances professional pride has made the interpretation that switching a child between regular classes is somehow an affront to the first teacher. To avoid traumatizing the teacher, many children have been further traumatized, placed unnecessarily in special, segregated classes, and additional financial expenses have accrued in order to pay for this child's "special" education. Therefore it should become policy to explore the possibilities of transferring a student between regular classes, whenever there is the chance that he might be best served within a different regular placement. Only if this is made school or system-wide policy can problems of injured pride be avoided and education of certain children be most effective.

B. Maintenance in the Regular Classroom Program, Part-Time

So far this paper has been considering methods by which the first category of Deno's model might be actualized. The final purpose here is to describe briefly the types of special education services that might be provided in those intermediary categories between regular and special class placement. A small amount of research has been conducted to test the efficacy of these services, and that data will be included here.

The maintenance of the learning-handicapped child in a regular class may also be aided by the use of special instructional materials and equipment. This would represent the least degree of special education services intervention in an otherwise normal program, and the feasibility of this is of course dependent upon what materials are available for use, and whether the available materials have any effectiveness in remediating the difficulties of the particular child.

When this treatment does not appear to be effective, special education consultants may be available to the school from a central office. These consultants can provide diagnostic and prescriptive assistance to the regular teacher, in order to help her better deal with the student in question. They may also spend some time tutoring pupils and counselling pupils and parents. This type of special service bridges the transition between categories 1 and 2 in Deno's model.

When the degree of direct contact between special education consultant and child increases the administrative plan called for is the use of itinerant teachers. In this scheme a teacher who is based at a central office travels between schools, spending the major portion of her time tutoring pupils individually or in small groups. She may require that the school set aside for her a special tutoring room, or she may be able to be of remediative assistance to the child within the regular classroom, cooperating with the regular teacher in a team-teaching approach. This is of obvious value for the regular teacher, for whom it becomes possible to observe the specialist at work, and by so doing gain a degree of proficiency in the remedial methods used. A school may employ this type of special tutor, to be based at that school on a full-time basis. This allows for more time to be spent with the children, while less time

goes to travelling between schools; however, the cost of such full-time services frequently prohibits the practice. Zedler's (1968) research employed after-school tutoring as the technique for supplementing the education of neurologically-disordered children, and found that the academic gains made by children so treated exceeded those made by children placed in full-time special classes.

When a child appears to need more help than can be achieved through the use of a special tutor it is sometimes possible to organize special resource classrooms, where specialized materials and/or instruction is made available to the child on a part-time basis. "The key difference between a resource room and a self-contained special class is that the child attends the resource room only on a part-time basis, remaining for at least a portion of the day in his regular classroom."[8] In the Buffalo, New York area resource room programs are specifically limited to those students who can be maintained in regular classes at least half-time, "If it is determined that more time is needed, the child is placed in a special class."[9]

Typically the resource room is located in a regular elementary or secondary school, serving the needs only of that school's special students. Two models of resource rooms exist today - the categorical and the non-categorical resource rooms. The former is available only to those children who satisfy a particular psycho-medical disability label; for example the educable mentally retarded, or the minimally brain damaged. It is reasonable to expect that those problems of

stigmatization of students which occur when they are specially labelled and specially placed in self-contained classes are similarly likely to occur when the resource room is categorically limited. The non-categorical resource room is designed to serve the needs of any special student in the school; here specific remediation techniques are applied to specific learning situations on an individualized basis. As this type of resource room is not limited by disability labels, the non-categorical resource room may be as capable of serving exceptionally "gifted" students as it is of serving exceptionally "disabled" students. It is an acknowledged problem that the funding structures of many school systems at present permits the allocation of funds only according to disability labels, and therefore non-categorical resource rooms would not be accounted for in such a structure. However, as a shift away from self-contained special classes will necessitate a reorganization of funding policies in special education anyway, it is reasonable to hope that when such reorganization occurs, consideration of the benefits of non-categorical support will be made.

The resource room plan represents a new type of cooperative educational venture between regular and special educators, as the regular and resource classroom teachers must cooperate in efforts to help special students realize their fullest potentialities. Wiederholt (1974) points to the sensitive area of personal/professional politics which resource room programs are likely to affect. He notes that regular teachers have become accustomed to having the opportunity to relieve themselves of troublesome students by placing them in special self-contained classes.

In a resource room program these teachers will have to be persuaded that they can and should include these students in their regular classes. Wiederholt suggests that an educator from within the school be responsible first for converting the skeptics and then later, for the operation of the resource rooms once instituted. He emphasizes that this person should come from within the school, so that teachers are not put off by an outsider who appears only long enough to saddle them with a new program, not staying long enough to see the consequences himself. Wiederholt goes further in his consideration of the manner by which a resource room program should be instituted, asserting that there are three qualities crucial for a successful resource room teacher. The most important of these is that the teacher has the ability to work effectively with his colleagues - in fact, the author calls for a teacher gifted in "public relations" skills because he feels that the success of the resource room will largely rest upon the ability of the resource teacher to maintain the enthusiastic support of regular classroom teachers. Those other qualities essential for a resource room teacher include his ability to assess specific educational and behavioural problems and needs, and his ability to design and implement individualized instruction for the children referred to him.

Wiederholt (1974) lists the following fourteen points as the advantages of the resource room approach for mildly handicapped pupils:

1. Mildly handicapped pupils can benefit from specific resource room training while remaining integrated with their friends and age-mates in school.

2. Pupils have the advantages of a total remedial program which is prepared by the resource teacher but may be implemented in cooperation with the regular class teacher.

3. Resource rooms are less expensive as the teachers are able to serve a greater number of children than special class programs.

4. More children's needs can be served under the resource room arrangement than can be served by the present system.

5. Since the resource teacher is assigned to a particular school (unlike some school psychologists, remedial reading therapists, speech correctionists, or other itinerant staff), he is less likely to be viewed as an "outsider" by other teachers in the school. In addition, he probably better understands the programming problems in a particular school.

6. Because young children with mild, though developing, problems can be accommodated, later severe disorders may be prevented.

7. Because disability diagnoses are not necessary for placement purposes, pupils are not labelled in any way as handicapped.

8. Because labelling and segregation are avoided, the stigma invariably associated with receiving special attention is minimized.

9. Since most schools are large enough to accommodate one or more resource rooms, pupils can receive help in their neighbourhood school.

10. Pupils are the recipients of flexible scheduling in that remediation can be applied entirely in their classrooms by the regular teacher with some resource teacher support or in the resource room itself when necessary; also the schedule can be quickly altered to meet the children's changing situations and needs.

11. Because placement in the resource room is an individual school matter involving the principal, the teachers, and the parents, no appreciable time lapse need occur between the teacher's referral and the initiation of special services for the child.

12. Under this alternative, medical and psychological work-ups are done only at the school's request rather than on a screening-for-placement basis; thus, the school psychologist is freed to do the work he was trained to do instead of being relegated to the role of psychometrist.

13. Since the resource room will absorb most of the "handicapped" children in the schools, the special classes will increasingly become instructional settings for "truly" handicapped pupils, i.e., the children for whom the classes were originally intended.

14. Because of the resource teacher's broad training and experience with many children exhibiting different educational and behavioural problems and varying maturational levels, he is likely to become an 'in-house" consultant to his school.

That there are definite advantages to the resource room program as an alternative to special self-contained classrooms is supported by the Director and Supervisor of Special Education Services in Buffalo, New York. Reger and Koppmann (1971) report that "a very favourable reaction to the resource room program ... is displayed in part by the expansion from 11 units in 1969-70 to 23 units in 1970-71" in that area. "In addition the directors of special education programs from other parts of the state have visited the rooms and at least six other Boards of Cooperative Educational Services are starting resource room programs in the fall of 1971."[10]

So far there has been little empiracal study of the efficacy and effects of the resource room plans.

Sabatino (1971) compared the benefits of resource room plans to self-contained special and regular class placements for learning disabled children. Thirty elementary school aged children were assigned to Resource Room Plan A, which meant that they received specialized instruction in small groups of from 4 to 8 pupils for one hour a day in the Resource Room, with a specialist teacher. Sixty children were assigned to Resource Room Plan B, which designated that each child would be specially tutored by the resource teacher for one-half hour twice

weekly. Twelve children were assigned to a special self-contained classroom, and twelve children remained in the regular classroom. The findings of this study indicated that all special treatments were more effective than the regular, non-individualized classroom program; that daily supplementary instruction in the resource room was more effective than bi-weekly treatment, even when total amount of time spent in the resource room under the two plans was equalized. The Resource Room Plan B showed the least amount of academic gain in achievement areas measured, but the findings also indicated that more than eleven children in this plan gained as much as did eleven out of the twelve children in the self-contained special class situation. The resource room arrangement is one example of possible special education services intermediary between full integration and segregation. This plan would correspond to Deno's category 2.

Another type of instruction that is similar to the resource room, but which moves into the third category in the Deno model, is the part-time special class. Children requiring still more assistance than is available in resource room arrangements may be assigned to a special class within a regular school, while at the same time receiving some of their academic instruction in a regular grade. The important difference between this arrangement and the resource room plan is the location of the pupil's homeroom. With the use of the part-time special class children with problems of varying degrees of severity can be integrated in the general school programs, to whatever degree is possible. It might be expected, however, that the more the arrangement approximates that of self-contained special classes, the greater is the liklihood that some of the disadvantages of such classes will emerge.

It has been the object of this paper to report the data relevant to an understanding of the ramifications of segregated special classes for certain handicapped children, and particularly for learning-handicapped children. The most recent literature in the field would suggest that such special classes are not only less than impressively effective in improving the academic achievement of many handicapped children, but also that the policy of segregated special education may violate a fundamental goal of providing equal educational opportunities for all.

School systems must face the fact that the near future will bring increased demands for curricula that are relevant to and "reflective of human variability rather than of artificial norms and averages."[11] Such methods of individualizing instruction for all children are at least first steps towards restructuring the educational system so that it is capable of accommodating the greatest number of children in its regular organization. By lessening the distance between the fields of regular and special education more meaningful dialogue and greater cooperation among educators in these groups becomes possible. The diagnostic and remediation talents of special educators would serve the needs of a larger population, once they become available to assist in the wide range of "exceptional school situations" regular classroom teachers continually face. Hopefully in this way mild disturbances (or differences) could be recognized and treated by regular and special educators before they developed into more severe handicaps. The special educator who traditionally was isolated within self-contained classes for the handicapped would likely be the most capable person to function

as resource teacher under a resource room arrangement. Increasing the contact between regular and special personnel would be likely to stimulate both, and lend important perspective to the experiences of both types of educators. When special and regular educators can share the responsibility for developing each child to his own potential; when few children are burdened with labels of normal or abnormal, but rather all are treated as individuals expressing the wide range of human potential and variability; then the field of education will be providing a model of respect for individual differences, and in this way be contributing to the realization of the humanitarian goals to which educators have long aspired.

VII. SUMMARY AND RECOMMENDATIONS

This paper reviews descriptions and studies of classes for children with learning disabilities. On the basis of this review, full-time, self-contained classes are not recommended for such pupils; instead, a part-time, highly-individualized resource room program for pupils with non-specified learning disabilities is recommended, as is much closer collaboration between the regular classroom and the resource room teachers, whose combined efforts should result in a full-time program with a high degree of individualization for pupils with special learning difficulties.

NOTES

1 Lloyd M. Dunn (ed.), Exceptional Children in the Schools: Special Education in Transition (2nd ed. rev.; New York: Holt, Rinehart and Winston, Inc., 1973), page 40.

2 W. G. Fleming, Ontario's Educative Society, Vol. III: Schools, pupils and teachers (Toronto: University of Toronto Press, 1971), page 363.

3 Ibid., page 364.

4 Dunn, op. cit., page 157.

5 William M. Cruickshank, "Some Issues Facing the Field of Learning Disabilities", Journal of Learning Disabilities, V (August/September, 1972), page 388.

6 Ibid., page 387.

7 Richard Pi. Iano, "Shall We Disband Special Classes?" The Journal of Special Education, VI (Number 2, 1972), page 173.

8 W. Lee Wiederholt, "Planning Resource Rooms for the Mildly Handicapped", Focus on Exceptional Children, V (Number 8, January, 1974), page 1.

9 Roger Reger and Marion Koppmann, "The Child Oriented Resource Room Program", Exceptional Children, XXXVII (February, 1971), page 461.

10 Ibid., page 462.

11 Florence Christoplos, "Keeping Exceptional Children in Regular Classes", Exceptional Children, (April, 1973), page 569.

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